CLAIM AMENDMENTS

A1

1. (Currently Amended) An apparatus usable with a subterranean well, comprising:

a magnetometer to indicate a strength of a magnetic field that at least partially extends through a portion of a downhole pipe; ~~and~~

a circuit coupled to the magnetometer to indicate a feature present in the pipe based on the indication from the magnetometer; and

a magnet to establish the magnetic field.

2. (Original) The apparatus of claim 1, wherein the features comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

Claims 3-4 (Cancelled)

5. (Original) The apparatus of claim 1, further comprising:

another magnetometer to indicate the strength of the magnetic field downhole,

wherein the circuit indicates the magnetic feature using the indications from both magnetometers.

6. (Original) The apparatus of claim 1, further comprising:

a telemetry interface to communicate a signal to a surface of the well to indicate the feature.

7. (Original) The apparatus of claim 1, wherein the magnetometer comprises a magnetic sensor to detect the strength of the magnetic field.

8. (Original) The apparatus of claim 7, wherein the magnetic sensor comprises one of the following:

a Hall-effect sensor, a silicon-based sensor, a superconducting quantium interference device, a Serach coil, a magnetic flux gate and a magnetoinductive device.

9. (Original) An apparatus usable with a subterranean well, comprising:

a magnet to establish a flux field near the apparatus, the magnet being formed from a material having magnetic properties similar to SmCo-30 and the flux field at least partially extending through a portion of a downhole pipe; and

a winding to generate a signal produced by a change in a strength of the flux field to indicate detection of a feature of the pipe.

10. (Original) The apparatus of claim 9, wherein the features comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

11. (Original) The apparatus of claim 9, wherein the apparatus has a longitudinal dimension less than or equal to approximately two inches.

12. (Original) The apparatus of claim 9, further comprising:

a bobbin around which the winding is wound, the bobbin formed from a material having ferromagnetic properties similar to ferromagnetic properties exhibited to Carpenter Electrical iron.

13. (Original) An apparatus usable with a subterranean well, comprising:

a magnet to establish a flux field that at least partially extends through a portion of a downhole pipe; and

a winding to generate a signal produced by a change in a strength of the flux field to indicate a feature of the pipe, the winding having at least approximately 1000 turns.

14. (Original) The apparatus of claim 13, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

15. (Original) The apparatus of claim 13, wherein the apparatus has a longitudinal dimension less than or equal to approximately two inches.

16. (Original) The apparatus of claim 13, further comprising:

a bobbin around which the winding is wound, the bobbin formed from a material having ferromagnetic properties similar to ferromagnetic properties exhibited to Carpenter iron.

17. (Original) An apparatus usable with a subterranean well, comprising:

a magnet to establish a flux field near the apparatus, flux field at least partially extending through a portion of a downhole pipe; and

a winding to generate a signal produced by a change in a strength of the flux field to indicate a feature of the pipe;

wherein the apparatus has a longitudinal dimension not exceeding approximately two inches.

18. (Original) The apparatus of claim 17, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

19. (Original) The apparatus of claim 17, wherein the apparatus has a longitudinal dimension less than or equal to approximately two inches.

20. (Original) An apparatus usable with a subterranean well, comprising:

a magnet to establish a flux field that extends at least partially through a portion of a downhole pipe; and

a winding to generate a signal produced by a change in a strength of the flux field to indicate detection of a feature of the pipe, the winding having at least approximately 40,000 turns.

21. (Original) The apparatus of claim 20, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

22. (Original) The apparatus of claim 20, wherein the apparatus has a longitudinal dimension less than or equal to approximately two inches.

23. (Original) An apparatus usable in a subterranean well, comprising:

a first winding to generate a first signal in response to a change in a magnetic field at least partially extending through the first winding and at least partially extending through a portion of a downhole pipe to indicate detection of a feature of the pipe;

a second winding to generate a second signal in response to a change in the magnetic field to indicate detection of the feature, the magnetic field at least partially extending through the second winding;

a first interface coupled to the first winding to communicate the first signal to the surface of the well when the apparatus is in a powered mode; and

a second interface coupled to the second winding to communicate the second signal to the surface of the well when the apparatus in an unpowered mode.

24. (Original) The apparatus of claim 23, further comprising:

a bobbin, wherein the first and second windings are wound around the bobbin.

25. (Original) The apparatus of claim 23, wherein the powered interface comprises an amplifier.

26. (Original) The apparatus of claim 23, wherein the unpowered interface comprises a resistor network.

27. (Currently Amended) A method usable with a subterranean well, comprising:

sensing a strength of a magnetic field that at least partially extends through a portion of a downhole pipe; ~~and~~

using a magnet to establish the magnetic field; and

based on the sensed strength, generating a signal indicative of a feature of the pipe.

28. (Original) The method of claim 27, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

Claims 29-30 (Cancelled).

31. (Original) The method of claim 27, wherein the signal comprises a signal communicated to a surface of the well indicating the feature.

32. (Original) The apparatus of claim 27, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

33. (Original) A method usable with a subterranean well, comprising:

using a magnet to establish a flux field that at least partially extends through a portion of a downhole pipe, the magnet being formed from a material having magnetic properties similar to SmCo-30; and

sensing a change in a strength of the flux field to indicate detection of a feature of the pipe.

34. (Original) The method of claim 33, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with a tubular member that at least partially surrounds the apparatus.

35. (Original) A method usable with a subterranean well, comprising:

establishing a magnetic flux field that at least partially extends through a portion of a downhole pipe; and

using a winding to generate a signal produced by a change in a strength of the flux field, the winding having at least approximately 40,000 turns.

36. (Original) The method of claim 35, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

37. (Original) A method usable in a subterranean well, comprising:

providing a first winding to generate a first signal in response to a change in a magnetic field at least partially extending through the first winding and at least partially extending through a portion of a downhole pipe to indicate detection of a feature of the pipe;

providing a second winding to generate a second signal in response to a change in the magnetic field to indicate detection of the downhole feature, the magnetic field at least partially extending through the second winding;

using a first interface coupled to the first winding to communicate the first signal to the surface of the well in a powered mode; and

using a second interface coupled to the second winding to communicate the second signal to the surface of the well in an unpowered mode.

38. (Original) The method of claim 37, further comprising:

winding the first and second windings around a bobbin shared in common.

39. (Original) The method of claim 37, wherein the first interface comprises an amplifier.

40. (Original) The method of claim 37, wherein the second interface comprises a resistor network.

41. (Original) A method usable with a subterranean well, comprising:

sensing a strength of a magnetic field that at least partially extends through a portion of a downhole pipe; and

based on the sensed strength, generating a signal indicative of sudden transverse movement.

42. (Original) The method of claim 41, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

43. (Original) The method of claim 41, further comprising:

using a magnet to establish the magnetic field.

44. (Original) The method of claim 41, further comprising:

not using a magnet to establish the magnetic field.

45. (Original) The method of claim 41, wherein the signal comprises a signal communicated to a surface of the well indicating the feature.

46. (Original) The apparatus of claim 41, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

47. (Original) A method usable with a subterranean well, comprising:

using a magnet to establish a flux field that at least partially extends through a portion of a downhole pipe, the magnet being formed from a material having magnetic properties similar to SmCo-30; and

sensing a change in a strength of the flux field to indicate sudden transverse movement.

48. (Original) The method of claim 47, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with a tubular member that at least partially surrounds the apparatus.

49. (Original) A method usable with a subterranean well, comprising:

establishing a magnetic flux field that at least partially extends through a portion of a downhole pipe; and

using a winding to generate a signal produced by a change in a strength of the flux field to indicate sudden transverse movement, the winding having at least approximately 40,000 turns.

50. (Original) The method of claim 49, wherein the feature comprises at least one of the following:

a casing collar joint; and a geometry, anomaly, magnetic property or standoff distance associated with the pipe.

51. (Original) A method usable in a subterranean well, comprising:

providing a first winding to generate a first signal in response to a change in a magnetic field at least partially extending through the first winding and at least partially extending through a portion of a downhole pipe to indicate sudden transverse movement;

providing a second winding to generate a second signal in response to a change in the magnetic field to indicate detection of the downhole feature, the magnetic field at least partially extending through the second winding;

using a first interface coupled to the first winding to communicate the first signal to the surface of the well in a powered mode; and

using a second interface coupled to the second winding to communicate the second signal to the surface of the well in an unpowered mode.

52. (Original) The method of claim 51, further comprising:

winding the first and second windings around a bobbin shared in common.

53. (Original) The method of claim 51, wherein the first interface comprises an amplifier.

54. (Original) The method of claim 51, wherein the second interface comprises a resistor network.